

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:  
    sorting means for executing sorting processing  
of sorting a train of pixel values within the same  
5 line of a radiation image and thus rearranging the  
train of pixel values within the same line from  
pixels having higher pixel values to pixels having  
lower pixel values;  
    analyzing means for calculating a  
10 characteristic value from a predetermined region of  
the image after the sorting processing; and  
    gradation transforming means for executing  
gradation transformation processing of the radiation  
image based on the characteristic value.  
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2. The apparatus according claim 1, further  
comprised of irradiation region recognizing means for  
extracting an irradiation region region from the  
radiation image,  
20 wherein said sorting means executes the sorting  
process of the radiation image within the extracted  
irradiation region region.
3. The apparatus according claim 1, wherein the  
25 predetermined region for the calculation by said  
analyzing means is set as a region separated at a  
predetermined distance from an end on the side of a

low pixel value in the image having undergone the sorting processing.

4. The apparatus according claim 1, wherein the  
5 radiation image contains one or more regions of a gas part and a spinal part in the image.

5. An image processing apparatus comprising:  
radiation generating means for generating  
10 radiation;  
a two-dimensions X-ray sensor for transforming the radiation into a radiation image;  
sorting means for executing sorting processing of sorting a train of pixel values within the same  
15 line of the radiation image and thus rearranging the train of pixel values within the same line from pixels having higher pixel values to pixels having lower pixel values;  
analyzing means for calculating a  
20 characteristic value from a predetermined region of the image after the sorting processing; and  
gradation transforming means for executing gradation transformation processing of the radiation image based on the characteristic value.

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6. An image processing method comprising:  
a sorting step of executing sorting processing

of sorting a train of pixel values within the same  
line of a radiation image and thus rearranging the  
train of pixel values within the same line from  
pixels having higher pixel values to pixels having  
5 lower pixel values;

an analyzing step of calculating a  
characteristic value from a predetermined region of  
the image after the sorting processing; and

a gradation transforming step of executing  
10 gradation transformation processing of the radiation  
image based on the characteristic value.

7. A program for making a computer realize said  
image processing method according to claim 6.

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8. A readable-by-computer storage medium stored  
with a program for making a computer realize said  
image processing method according to claim 6.